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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,929	06/07/2004	Hideo Kimura	JP920030087	3928

32074 7590 12/01/2006

INTERNATIONAL BUSINESS MACHINES CORPORATION  
DEPT. 18G  
BLDG. 300-482  
2070 ROUTE 52  
HOPEWELL JUNCTION, NY 12533

EXAMINER

KRAUSE, JUSTIN MITCHELL

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/709,929

Applicant(s)

KIMURA, HIDEO

Examiner

Justin Krause

Art Unit

3682

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakino et al (US Patent 5,040,431) in view of Takahashi (US Patent 4,766,465).

Sakino discloses a positioning stage comprising:

- a base (1) having a first rail (20a, 20b) on its top surface;
- a first table (4) slidable along said first rail and having a second rail (a pair of rails straddle element 52) perpendicular to said first rail on its top surface;
- a first joint (43a, 43b) freely movable together with said first table toward said first rail relative to said base;
- a first clutch (124) for fixing said first joint to said base or releasing said first joint from said base;
- first forcibly-moving means (42a,42b) for moving said first table toward said first rail relative to said first joint;
- a second table (5) slidable along said second rail;
- a second joint (51a) freely movable together with said second table toward said second rail relative to said first rail;

-a second clutch (124, both clutches are labeled 124, and have similar structure (see fig 9, fig 8 shows the location of each clutch) for fixing said second joint to said first table or releasing said second joint from said first table; and

-a second forcibly-moving (52) means for moving said second table toward said second rail relative to said second joint.

With regard to claims 1, 5, and 9, Sakino discloses as prior art at the time of invention that screw and nut devices could be used as a driving actuator.

Takahashi teaches a first joint comprising a first female screw thread (4), a first forcibly-moving means comprising a first male screw (5) threaded into said first female screw thread, a second joint comprising a second female screw thread (not shown but described in Col 2, line 60) and a second forcibly-moving means (15) comprising a second male screw threaded into said second female screw thread to allow for accurate high speed operation with fine movement. (col 1, lines 15-16)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the forcibly moving means of Sakino and utilize forcibly-moving means as taught by Takahashi for the purpose of allowing accurate high speed operation with fine movement.

Claims 2 and 3 fail to structurally further limit claim 1, the device of Sakino is capable of performing the functions as outlined in claims 2 and 3.

Regarding claim 4, the base comprises a plate parallel to said first rail on its top surface, said first clutch comprises a first clamping mechanism (108, 109) for clamping said plate,

the first table comprises a plate parallel to the second rail on a top surface of said first table, said second clutch comprises a second clamping mechanism (108, 109) for clamping said plate.

### ***Response to Arguments***

2. Applicant's arguments filed September 21, 2006 have been fully considered but they are not persuasive.

Applicant argues that the combination of Sakino and Takashi would not produce the invention as claimed.

The examiner disagrees. Sakino discloses all of the claimed subject matter except the forcibly-moving means to be screws, but discloses that at the time of invention, the use of screw and nut devices (i.e. a male and female screw) is known to have been used in devices of this type (see col 1, line 31 and Fig 16) as a driving means (i.e. forcibly-moving means). Sakino itself, therefore provides a valid motivation for the use of screw devices to forcibly move the table. Takahashi teaches the arrangement of screw mechanisms as claimed with motivation that the use of screws facilitates fine movement. The replacement of the forcibly driving means of Sakino with the screw mechanisms of Takahashi would result in the same device as claimed, with motivation to combine provided by both Sakino and Takahashi.

***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

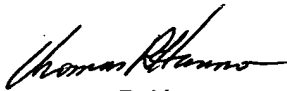
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK  
11/27/06

  
Thomas R. Hannon  
Primary Examiner